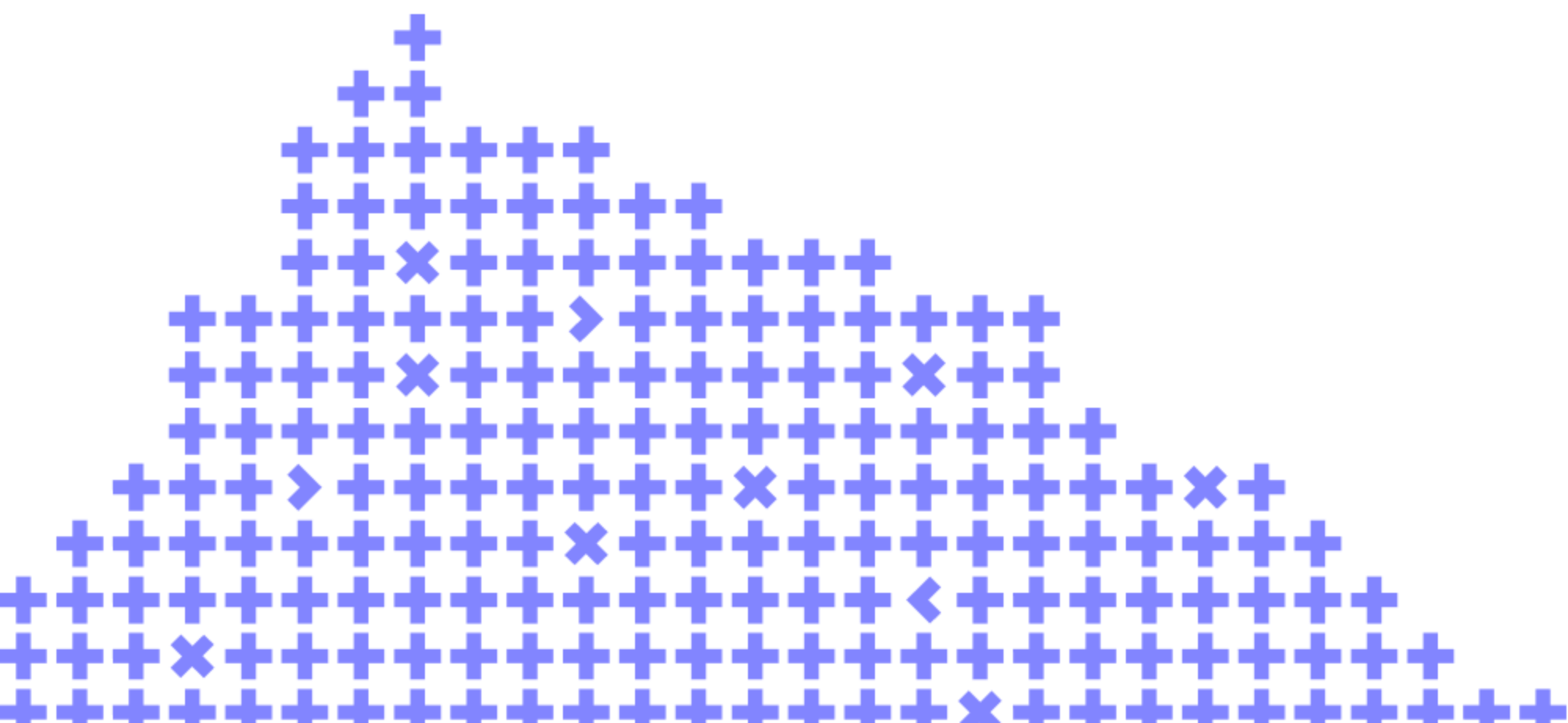


# Expanding From Consumer into Enterprise with APIs: build, learn, refine

Aram Mkhitarian



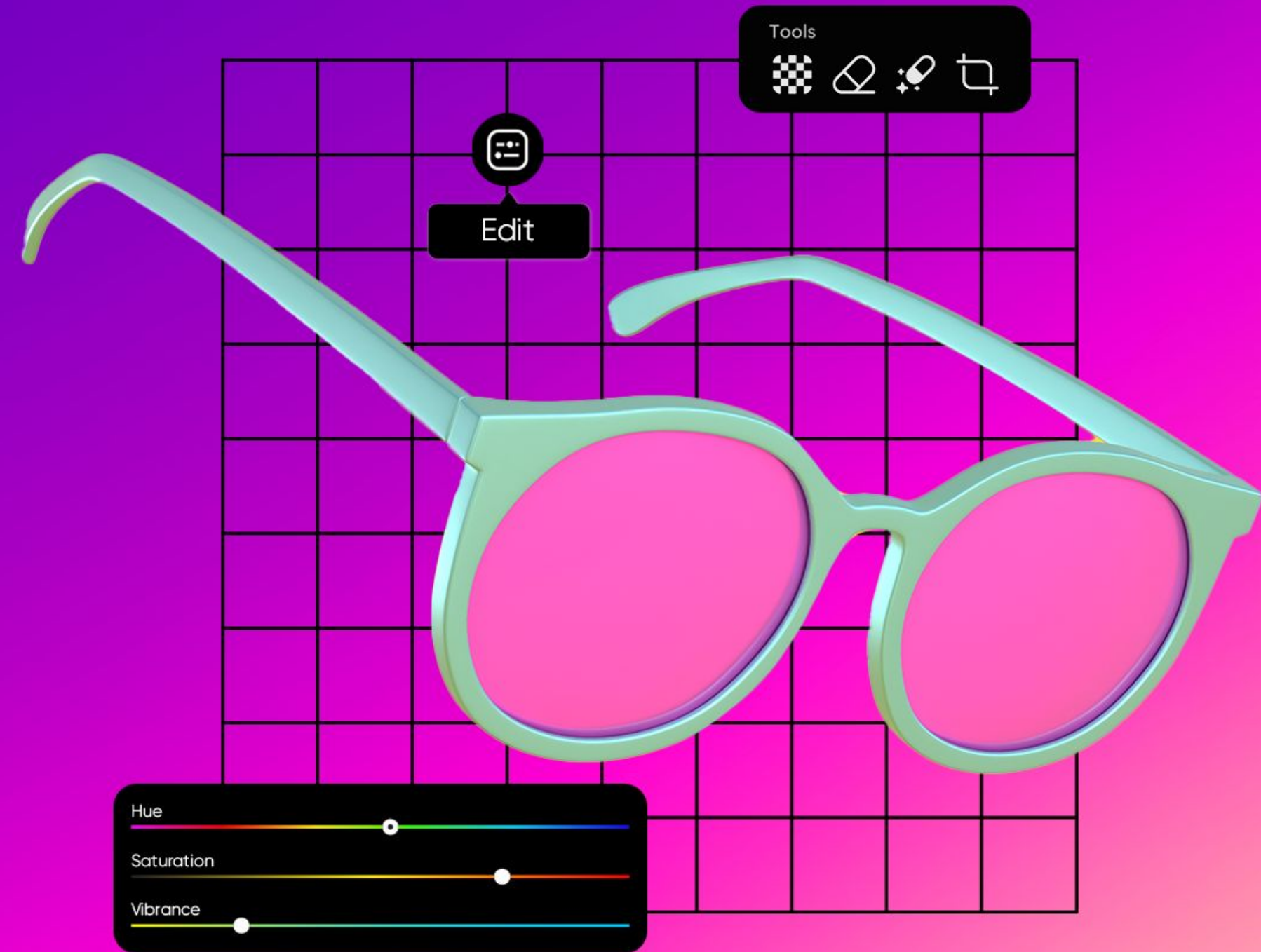
Co-organizer

**Yandex**



# Introduction

- Picsart's beginnings
- Picsart's growth (and challenges)
- Monolith to microservices
- Learnings and evolution that unlock a new way of doing business





# Picsart - A Decade of Growth

**150M**

*Monthly average  
users*

**300M**

*Community  
generated images*

**100M**

*Revenue*

**150**

*Releases*

**800**

*Experiments*

**1.50 PB**

*Traffic served*

**40B**

*Monthly backend  
requests*

# Challenges from Rapid Growth

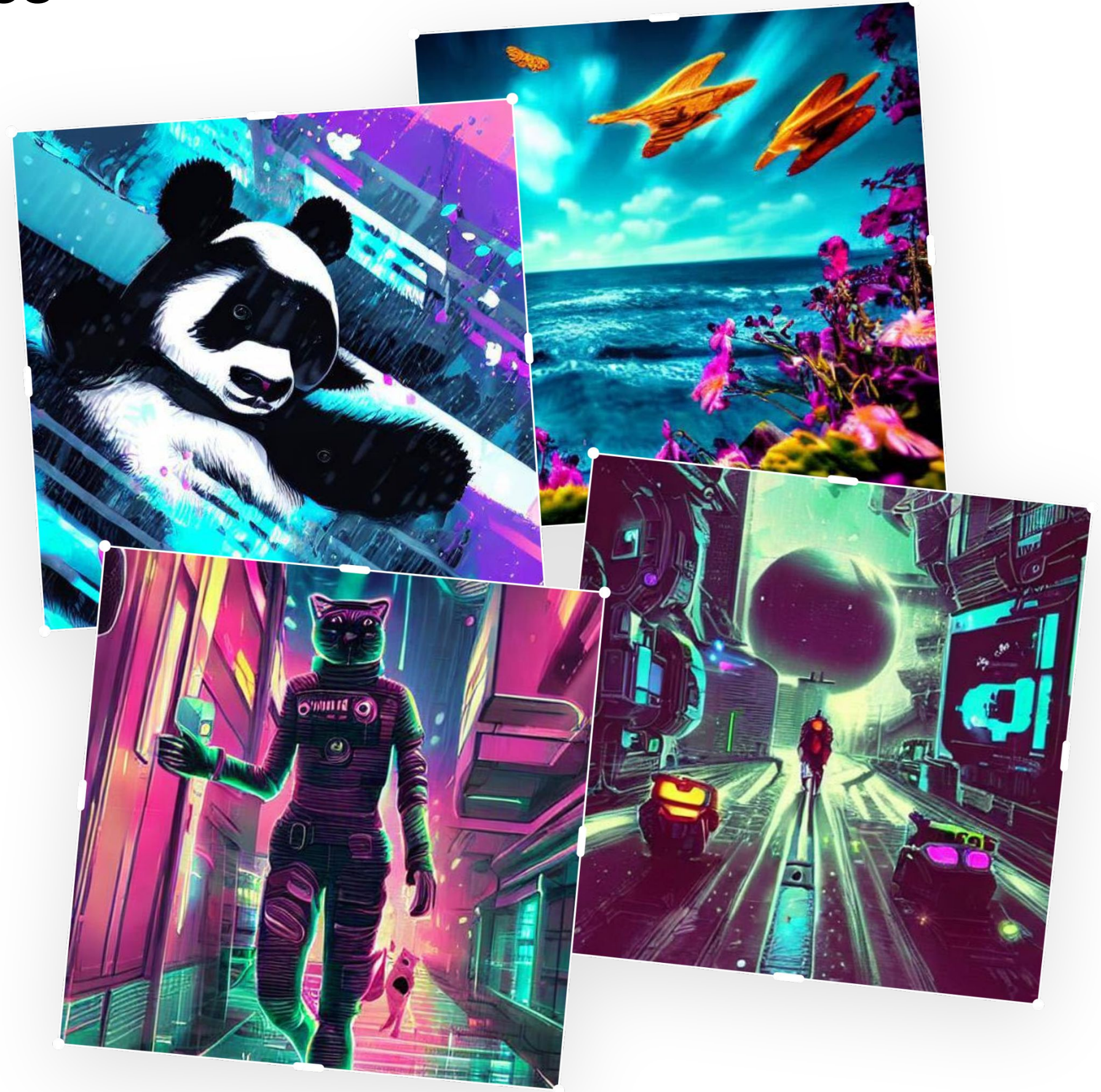
- Exponential growth in number of users
- Organic, accelerating demand for new features
- Complex release process
- One tech & Talent
- Incorporated AI models into image editing experience
- Interest from businesses looking to incorporate Picsart into their business workflows





# Solution - Monolith to Microservices

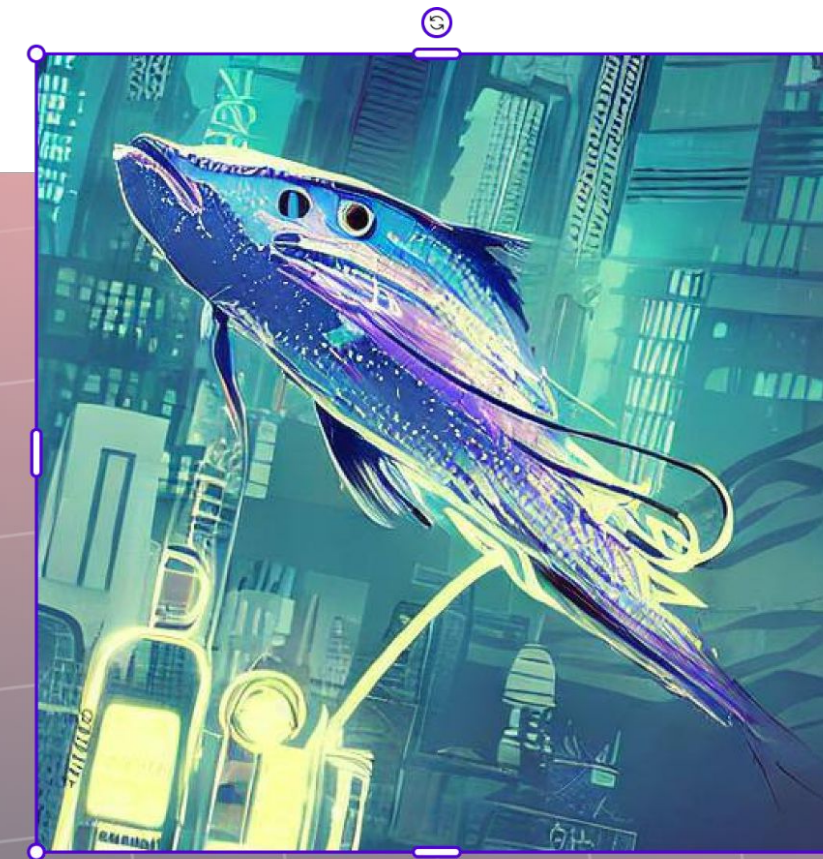
- Identifying signals of a change
  - Organic demand
  - Time consuming processes
  - Technology | Talent
- Standardize
  - Technology | Skillset
  - Locations
  - Processes





# Solution - Monolith to Microservices

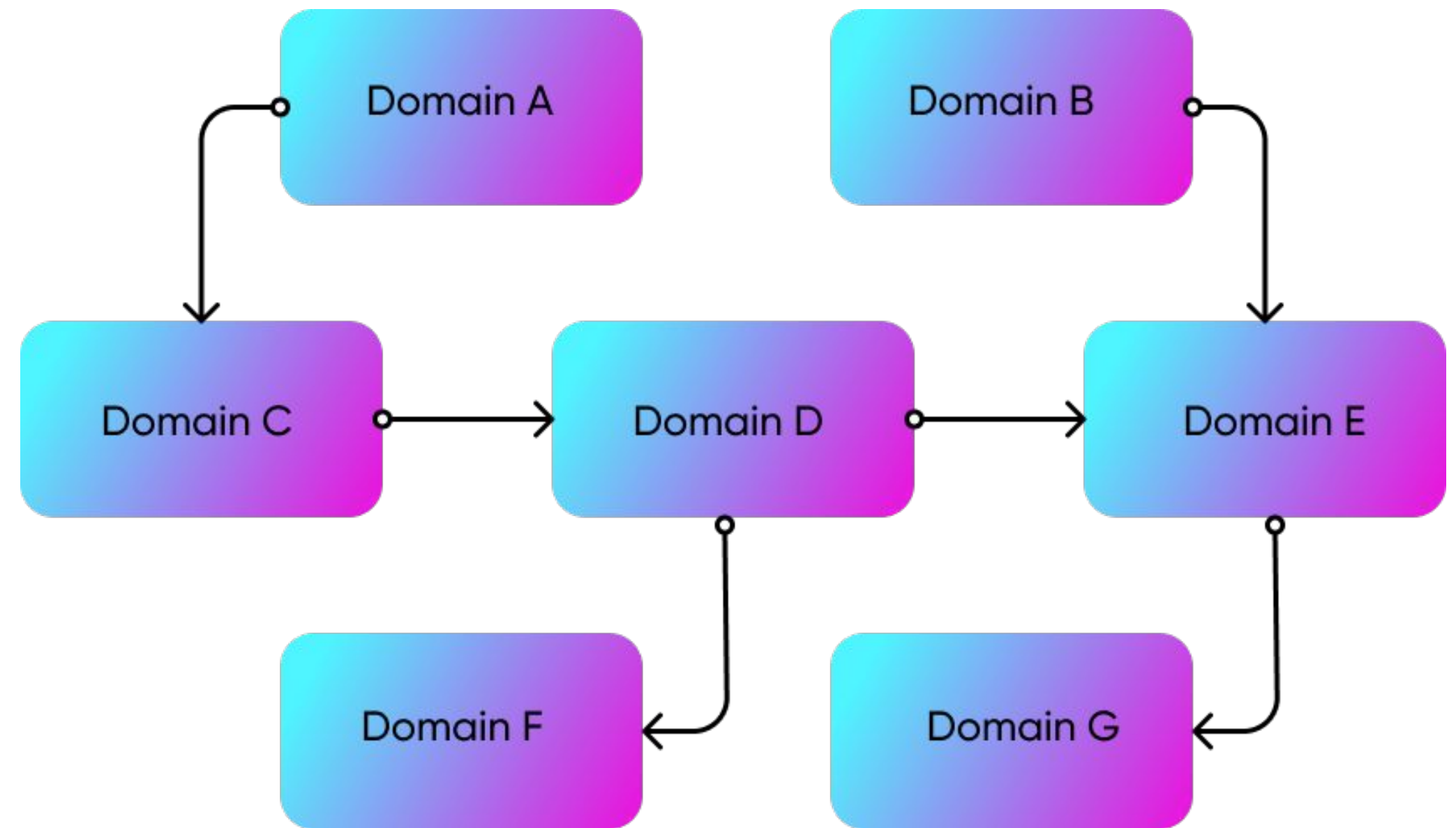
- Consider adopting packaged modern tools
- Change organizational structure to match the microservices' architecture
- More event-driven architecture to increase reliability





# Transitioning from Monolith to Microservices - Identify

- Identify main domains in the monolith
- Identify the domain boundaries, interactions, and dependencies

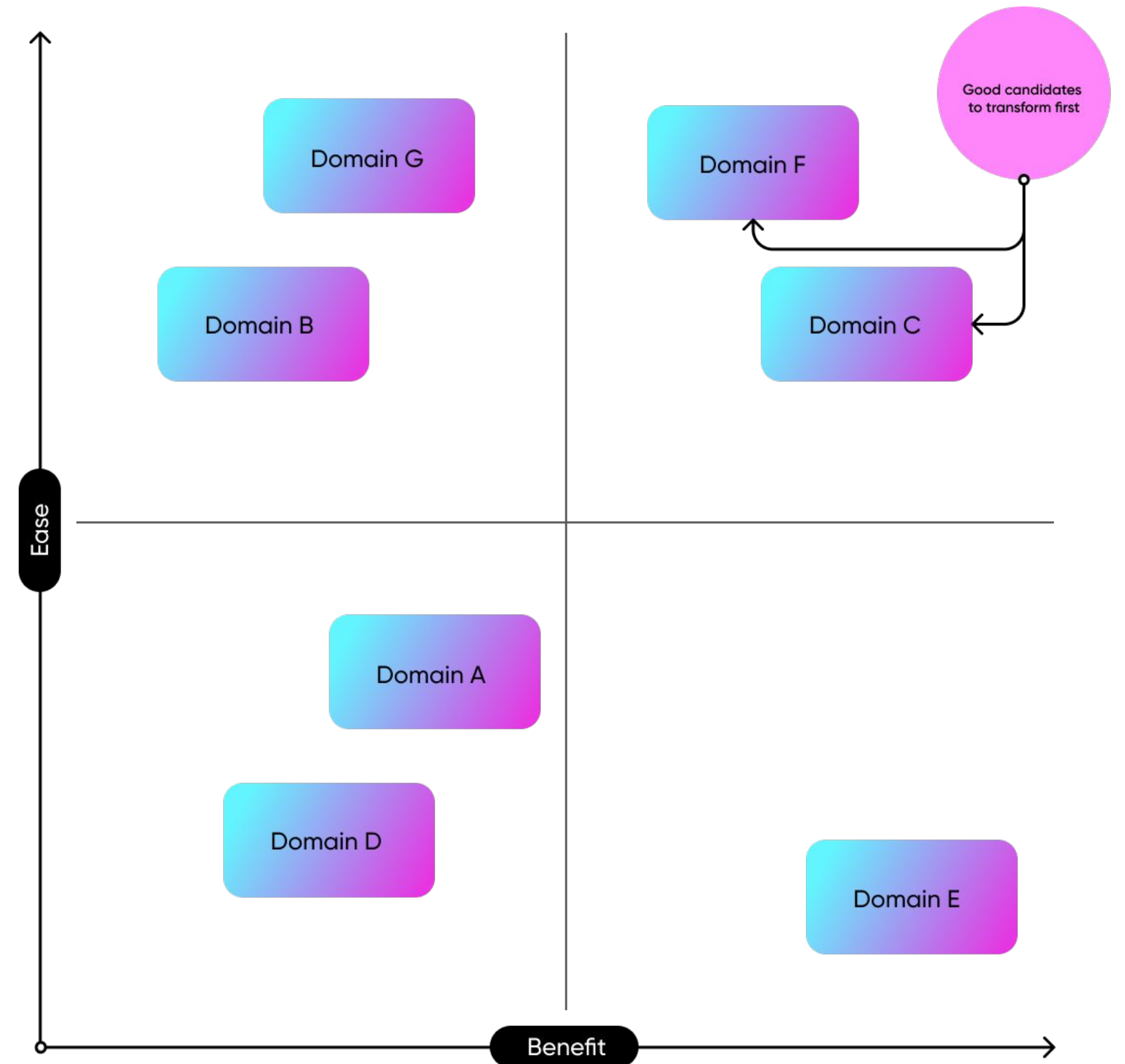




# Transitioning from Monolith to Microservices - Prioritize

## Prioritize

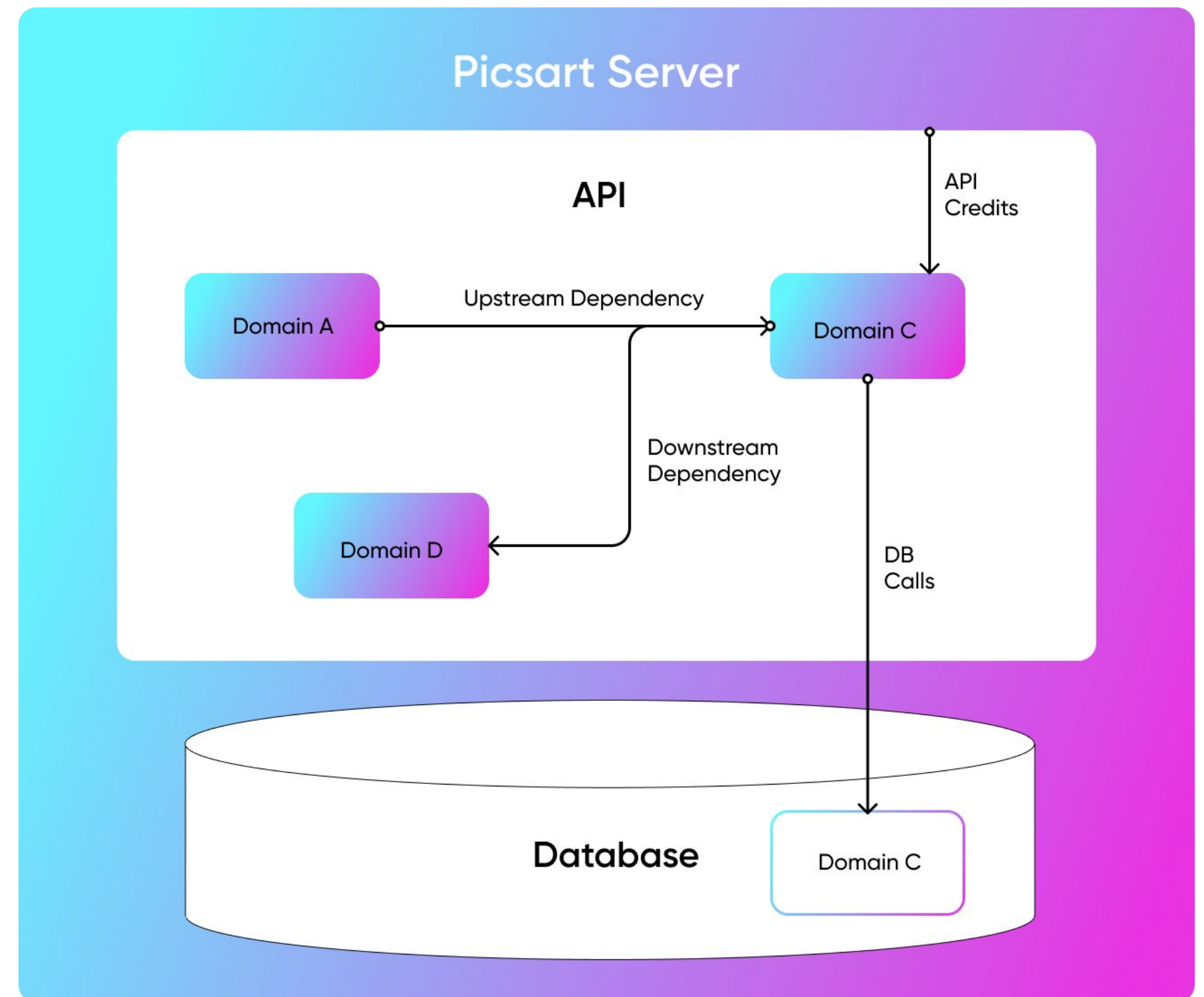
- Benefit vs Ease of a conversion map
- Considerations
  - Number of dependencies
  - Ease of moving the code
  - Usefulness of conversion



# Transitioning from Monolith to Microservices - Code

## Code

Separate domain related data

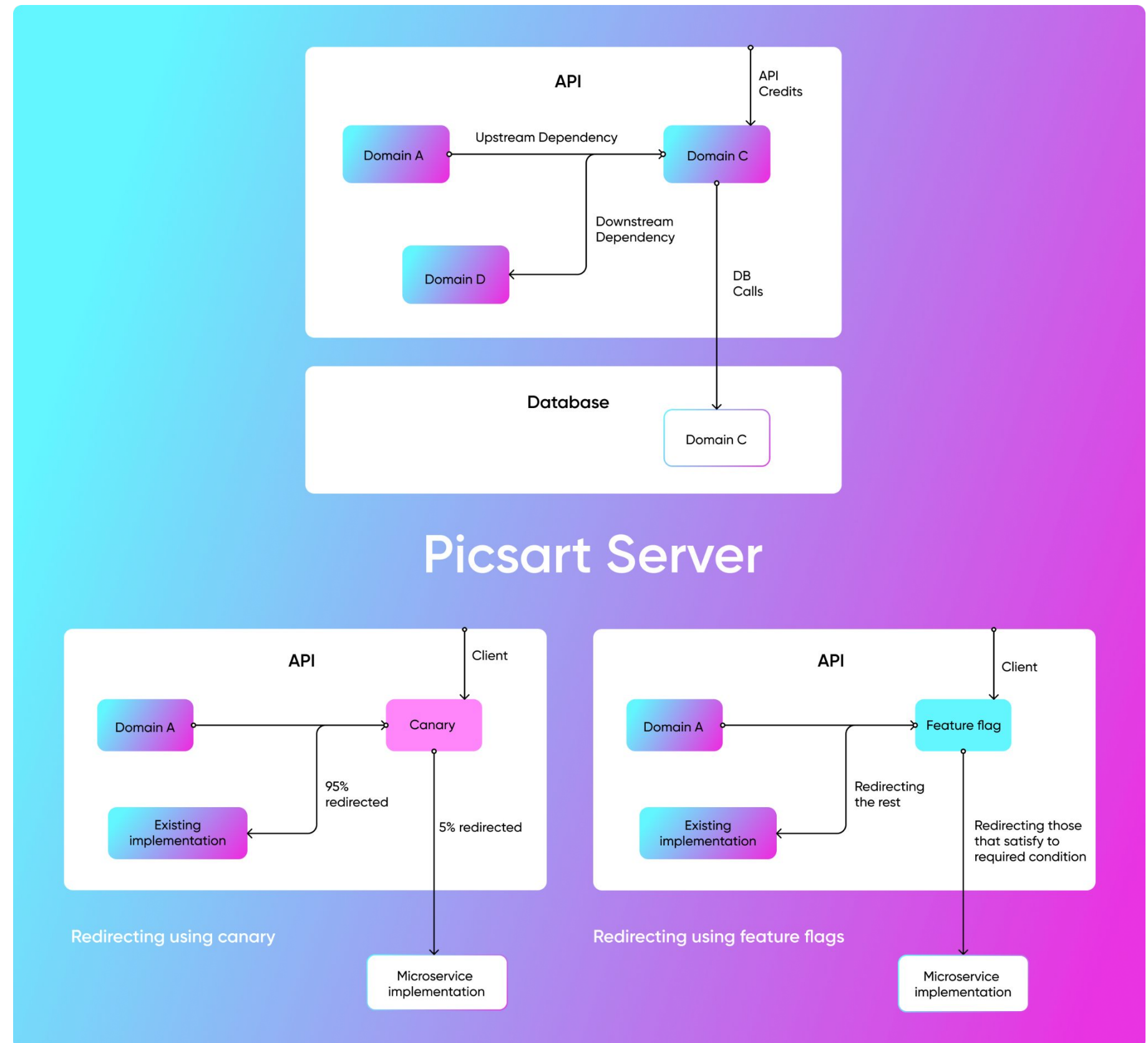




# Transitioning from Monolith to Microservices - Abstract and Migrate

## Abstract and Migrate

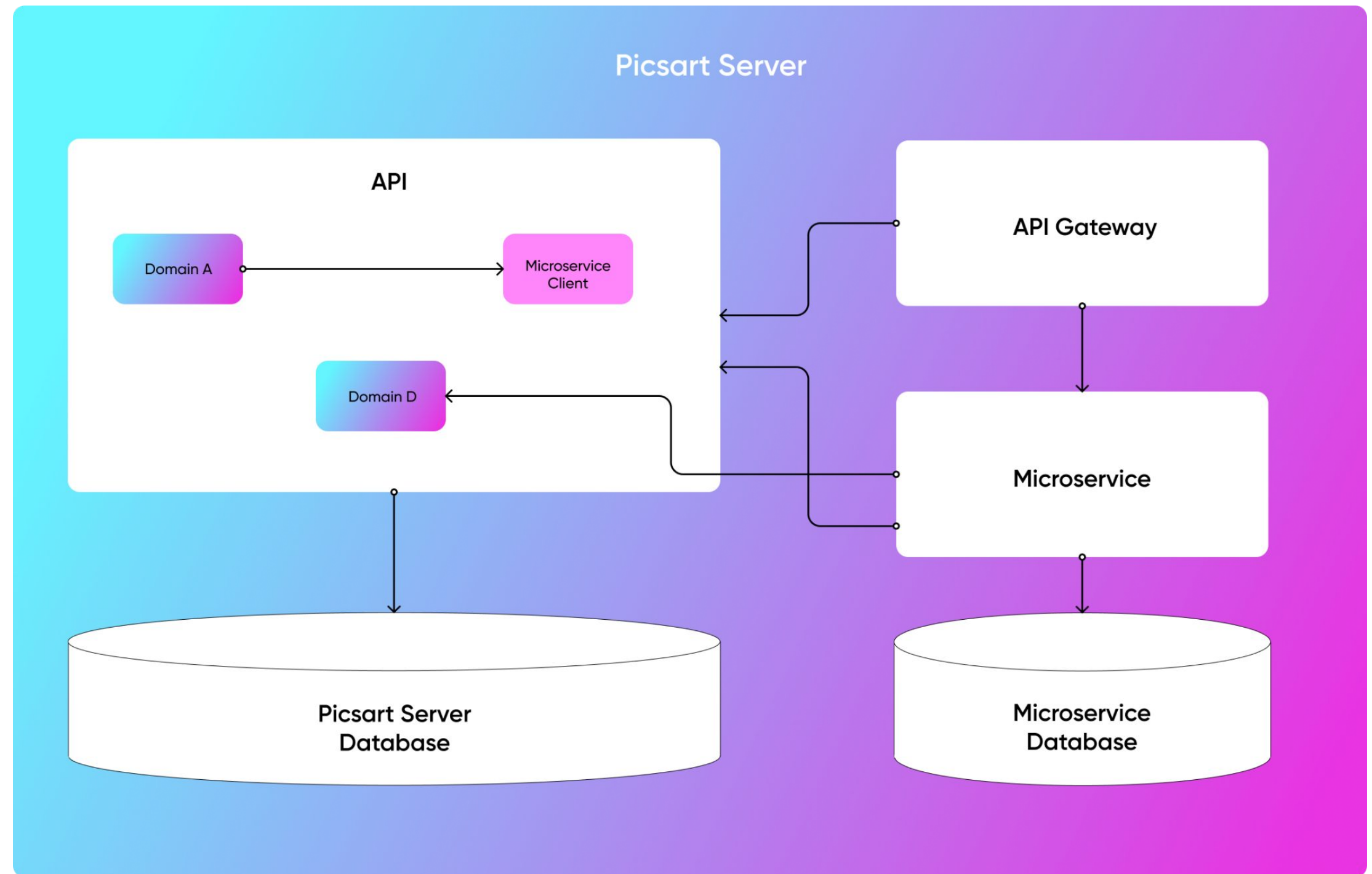
- Introduce an abstraction layer that sits on top of the code inside monolith
- Use this “client” to build the microservice
- Move functionality incrementally by copying the code
- Use feature flags to redirect calls to a microservice
- Expose API calls through api-gateway



# Transitioning from Monolith to Microservices - Final Step

## Final Step

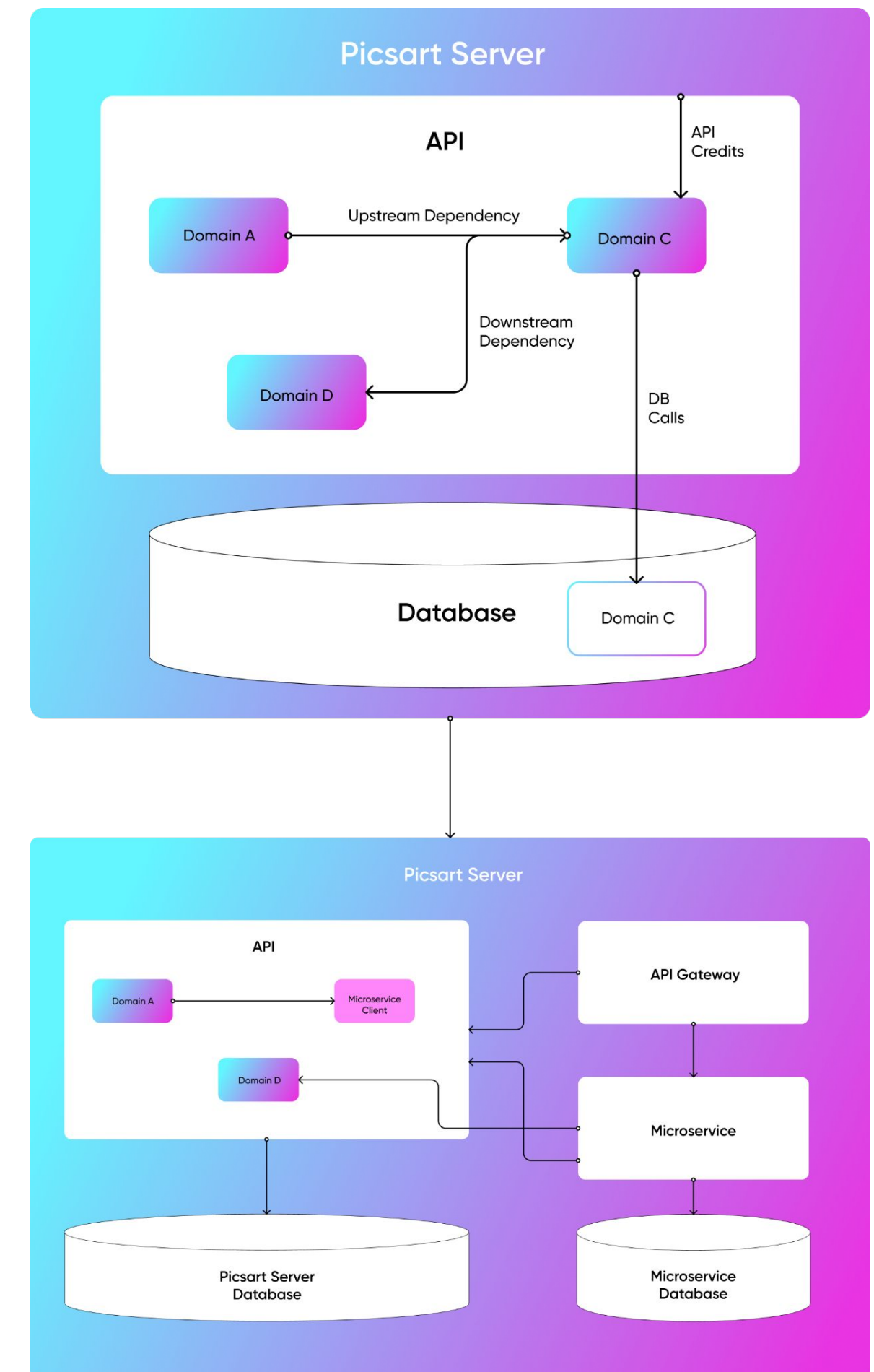
- Limit the client to the requests made by the monolith itself
- Completely wipe out original functionality





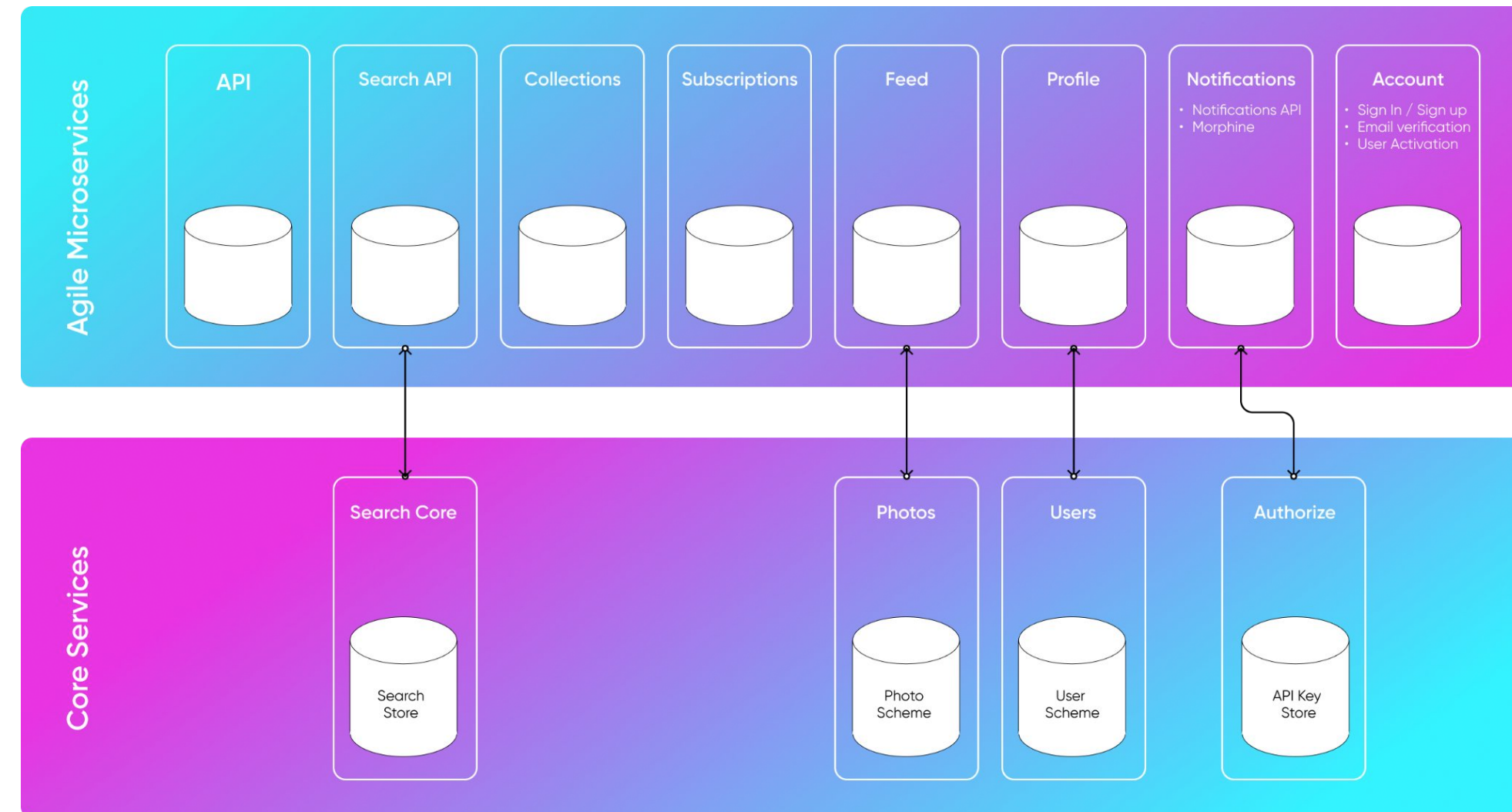
# Monolith to Microservices - Summarize

- Identify signals of a change
- Evaluate the current state of the monolith
- Incremental migration from the monolith to microservices
- Standardize
  - Technology
  - Location
  - Processes
- Change the organizational structure
- Consider packaged data tools



# Transitioning from Monolith to Microservices - Outcome

- Decoupling leading to more autonomy
- Increased release velocity
- Ability to run on GCP, AWS, Private Cloud
- Transitioning to Terraform
- Capability to deploy in any location





# Transitioning from monolith to microservices - Outcome

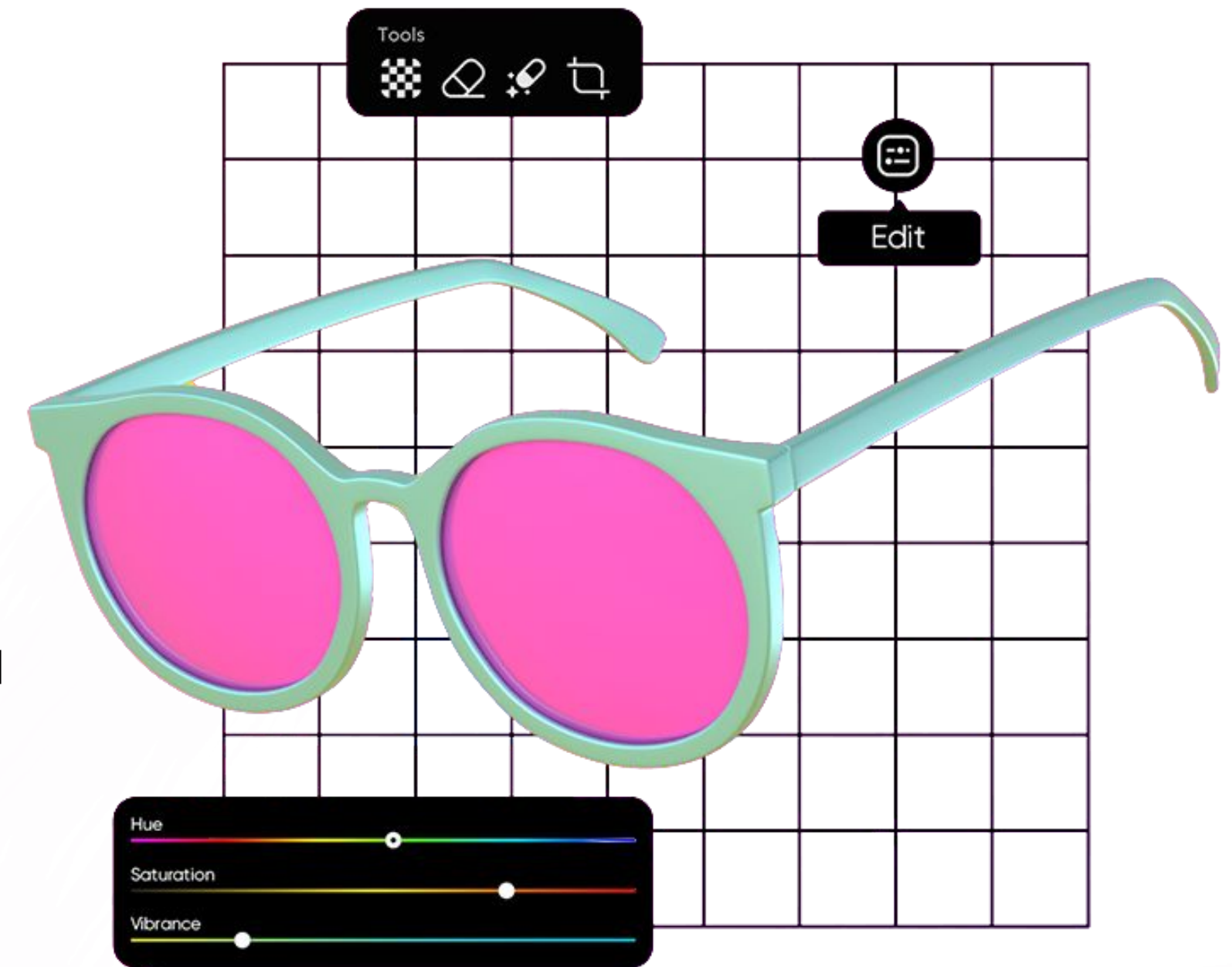
- New Revenue Sources
  - Picsart for Developers is expected to account for 20-25% of the total company revenue by 2025
- Bringing new BUs online / monetize individual services
  - API
  - SDK
- Building a circular business model
  - Consumer -> Enterprise -> Consumer





# Core vs Context - Picsart for Creative Solutions

- Picsart holds
  - Expertise is in creative tools
  - The best-in-class solutions in the creative photo and video editing
  - Cutting-edge proprietary image and video editing technology
  - Proprietary ML/AI to bring the solutions to a whole new level
- **Picsart publishes its technology as APIs and SDKs for the third parties**





# What Does It Take to Create a Successful API Program?

- Technology & Expertise
- Vision - Willingness to share
- Documentation
- API Gateway solution
- Enterprise-grade Security
- Developer Portal

## Picsart APIs

Creative APIs to empower creativity on any platform.

```
url = "https://api.picsart.io/picsart-apis"

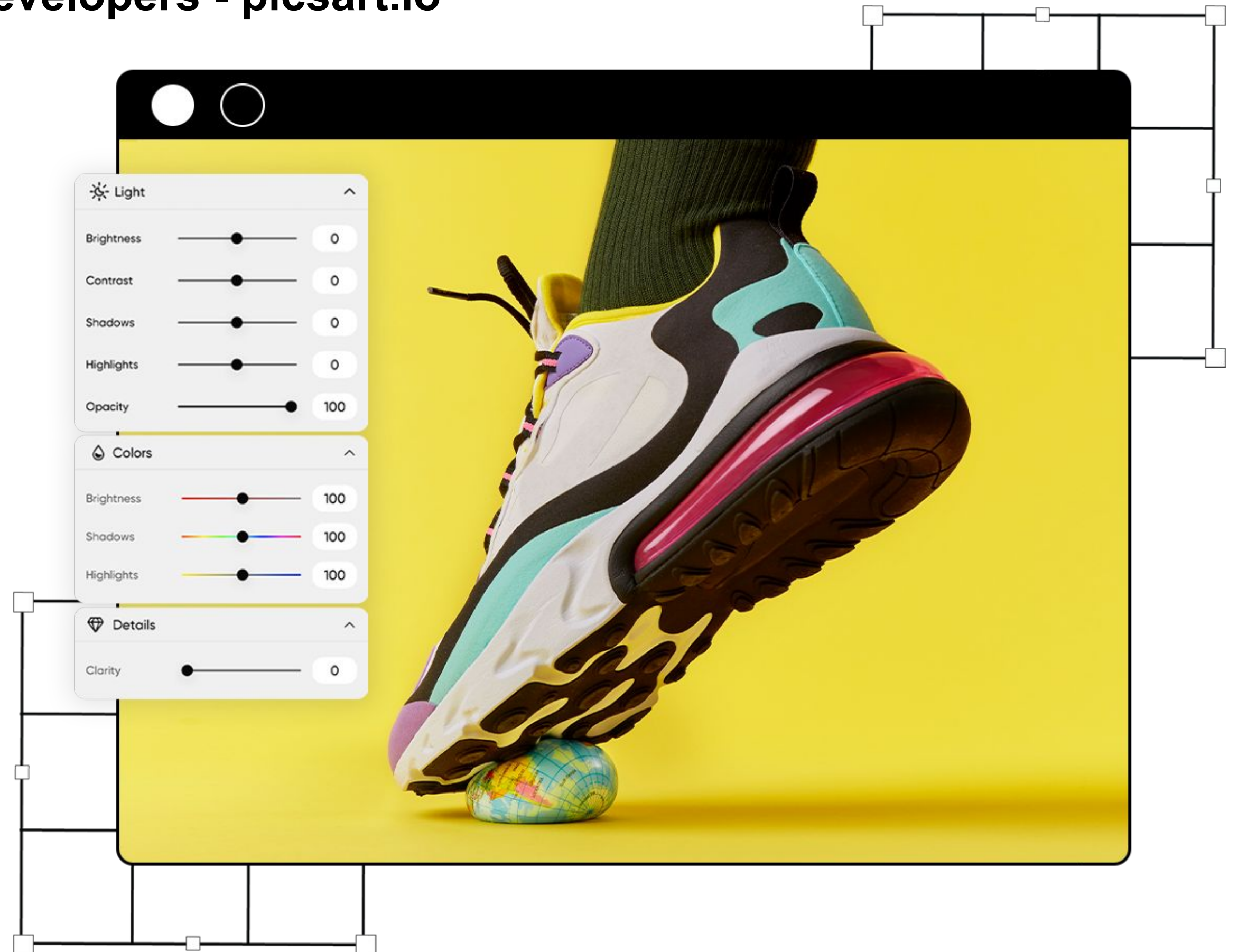
payload={"downscale_to": "2048"}
files=[
    ('image',('Mindless Consumption.png',open('Mindless Consumption.png','rb'),'image/png'))
]
headers = {
    "accept": "application/json"
}

response = requests.request("POST", url, headers=headers, data=payload, files=files)

print(response.text)
```

# APIs & SDK at Picsart for Developers - picsart.io

- Remove/Replace Background
- Upscale/Enhancement
- Texture Generator
- Style Transfer
- Filters
- Vectorizer
- Video APIs (beta)
- Editor SDKs





# Picsart Developer Fund

- \$1000 in developer credits to the first 1000 developers!
- Submit your applications today!



Picsart for Developers

## SUBMIT AN APPLICATION FOR A CHANCE TO WIN



We are looking for the best and brightest developers that are looking to unlock creative capabilities on their platform via API.

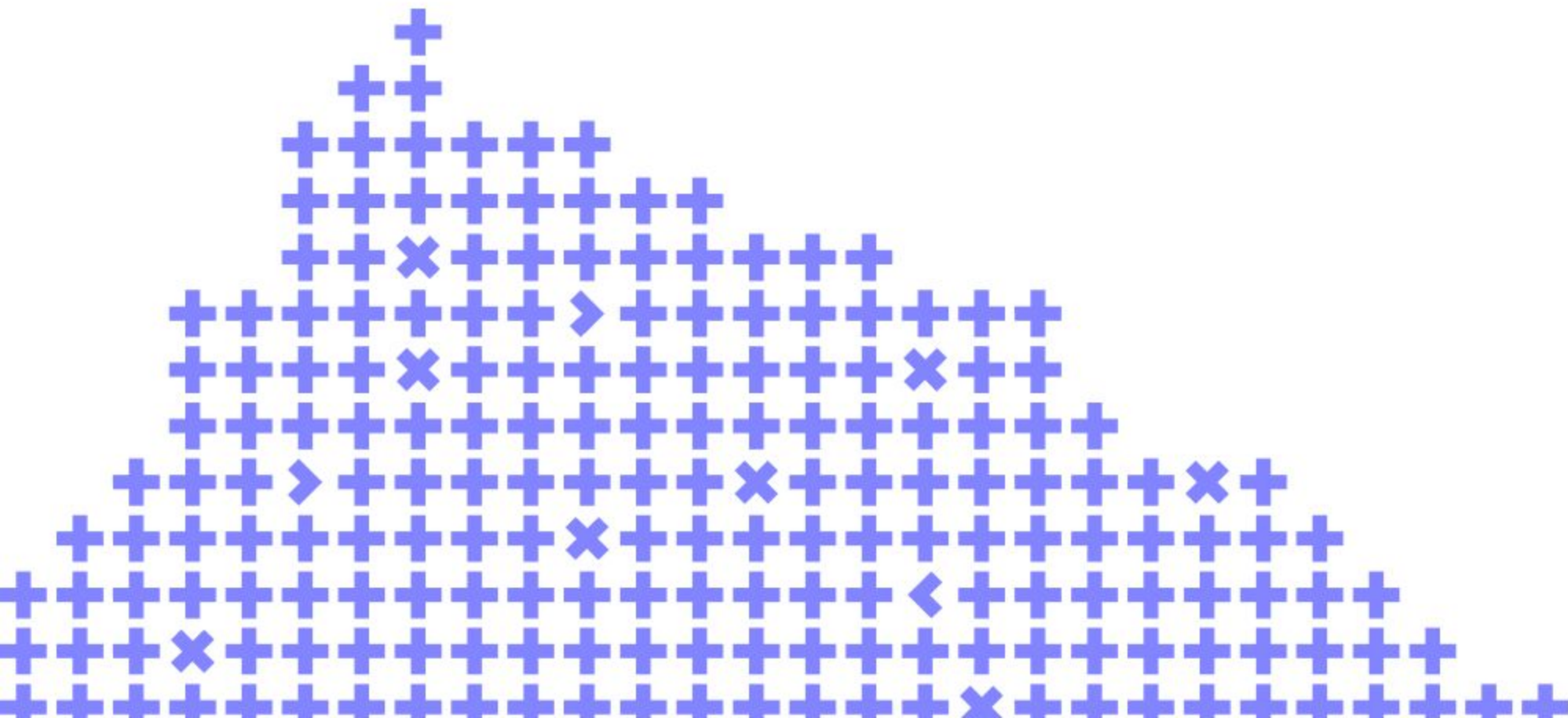




# Thank you!

## Leave your feedback!

You can rate the talk and give a feedback on what you've liked or what could be improved



Co-organizer

**Yandex**